WHAT IS CLAIMED IS:

1. A semiconductor device provided with a semiconductor substrate; a gate electrode formed on said semiconductor substrate; and an impurity diffusion region formed beside said gate electrode; wherein:

the impurity diffusion region comprises a first impurity diffusion region including a first P-type impurity and located in the proximity of a surface of the semiconductor substrate; and

a second P-type impurity diffusion region located below the first impurity diffusion region and including a second P-type impurity having a smaller diffusion coefficient in the semiconductor substrate than the first P-type impurity.

2. The semiconductor device in accordance with the Claim 1, wherein a concentration of the second P-type impurity in the second impurity diffusion region is lower than a concentration of the first P-type impurity in the first impurity diffusion region.

3. The semiconductor device in accordance with the Claim 1, wherein the first P-type impurity includes B.

4. The semiconductor device in accordance with the Claim 1, wherein the second P-type impurity includes In.

5. The semiconductor device in accordance with the Claim 1, wherein said impurity diffusion regions are provided on both sides of said gate electrode.

6. A method of manufacturing a semiconductor device provided

with a semiconductor substrate, a gate electrode formed on said semiconductor substrate and an impurity diffusion region formed beside said gate electrode, comprising:

forming a first impurity diffusion region that constitutes a part of said impurity diffusion region by ion implantation of the first P-type impurity in a region beside said gate electrode in the proximity of a surface of said semiconductor substrate; and

forming a second impurity diffusion region that constitutes a part of said impurity diffusion region by ion implantation of a second P-type impurity having a smaller diffusion coefficient in said semiconductor substrate than the first P-type impurity, in a region below the first impurity diffusion region.

7. The method in accordance with the Claim 6,

wherein the step of forming the second impurity diffusion region includes executing ion implantation of the second P-type impurity in the second impurity diffusion region, such that a lower concentration is achieved than a concentration of the first P-type impurity implanted in the first impurity diffusion region.

8. The method in accordance with the Claim 6,

wherein the step of forming the first impurity diffusion region includes executing ion implantation of B as the first P-type impurity.

9. The method in accordance with the Claim 6,

wherein the step of forming the second impurity diffusion region

includes executing ion implantation of In as the second P-type impurity.

10. The method in accordance with the Claim 9, wherein the step of forming the second impurity diffusion region includes executing ion implantation of the second P-type impurity with an implanting energy of not less than 80 keV but not greater than 180 keV.

11. The method in accordance with the Claim 9, wherein the step of forming the second impurity diffusion region includes executing ion implantation of the second P-type impurity in an implanting amount of not less than 5×10^{12} cm^{-2} but not greater than 1.5×10^{13} cm^{-2}.

12. The method in accordance with the Claim 6, wherein the step of forming the first impurity diffusion region is carried out after the step of forming the second impurity diffusion region.

13. The method in accordance with the Claim 6, further comprising: activating the first P-type impurity and the second P-type impurity by heat treatment of the first impurity diffusion region and the second impurity diffusion region.